REMARKS

Objections Addressed

The Specification has been amended to include a description of reference numeral 100 from FIGURE 1 and reference numeral 210 from FIGURE 2.

Rejections Addressed

Claims 1-9 are pending in the application. Claims 1-9 are newly added claims. Claims 1 and 6 are the independent claims.

The Office Action rejected Claims 1, 2, 4-6, and 8 under 35 U.S.C. 102(e) as being anticipated by Tong (U. S. 6,744,744 B1). In addition, the Office Action rejected Claims 3, 7, and 9 under 35 U.S.C. 103(a) as being unpatentable over Tong. Applicant respectfully disagrees with these rejections.

First of all, Tong and the present invention relate to different types of inventions. Tong relates to a method of matching a rate of data bits, in a matrix of data bits interleaved by a predetermined interleaving process, to a desired rate, by deletion of redundant data bits or repetition of data bits derived from the matrix. In particular, Tong relates to rate matching, which is used when an input transmission data number is not equal to a possible transmission data number. In contrast, the present invention relates to channel encoding, which is used to recover damaged data in a channel.

Second, the output of Tong is different from the output of the present invention. In rate matching, which is used in Tong, the input data bit is processed with a Max 20% puncturing and a Max 10% repetition. In contrast, in the present invention, when a bit I is input, an (I * N) bit (systematic bit I + I *(n-1)) is output in the channel encoding with a 1/n encoding rate. One of

ordinary skill in the art would not know to modify Tong by including the 1/4 encoding rate of the present invention.

Third, Tong teaches an interleaver that interleaves between systematic bits and parity bits, with a repeater that repeats only the systematic bits. In contrast, the present invention processes channel encoding, rate matching and only one interleaving, with a repeater that repeatedly outputs "predefined bits" among the bits output from the first and second convolution encoders. This feature is clearly taught in independent claims 1 and 6.

For the reasons set forth above, Applicant believes that independent claims 1 and 6 are allowable. Dependent claims 2-5 and 7-9 incorporate the features of independent claims 1 or 6, and are thus also allowable.

Applicants believe the objections and rejections in the Office Action have been addressed and that the application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone should the Examiner believe that personal communication will expedite prosecution of this application.

Respectfully submitted,

PIPER RUDNICK LLP

Yoon S. Ham
Registration No. 45,307
Attorney of Record

Lisa K. Norton
Registration No. 44,977

P.O. Box 9271
Reston, VA 20195
(202) 861-3871